

CLAIMS

What is claimed is:

1. A brake slack adjuster comprising:
 - a housing having an opening with a gear disposed within said opening, said housing including a bore adjacent to said opening;
 - a worm gear having an axis disposed within said bore engaging said gear, said worm gear having an end portion with helical teeth;
 - an actuator including an outer surface adjacent to said bore and an inner surface having complementary helical teeth engaging said helical teeth of said worm gear, said actuator having an aperture, and said actuator movable along said axis relative to said worm gear;
 - an actuator rod having an end disposed within said aperture captured in said actuator by a retainer; and
 - a pawl assembly coacting with said actuator retaining said actuator in a rotational position relative to said axis.
2. The brake slack adjuster according to claim 1, wherein said actuator is plastic.
3. The brake slack adjuster according to claim 1, wherein said inner and outer surfaces are defined by an arcuate wall.

4. The brake slack adjuster according to claim 3, wherein a biasing member is arranged between said actuator and said housing bore urging said actuator into engagement with said worm gear end portion.

5. The brake slack adjuster according to claim 4, wherein said actuator is movable along said axis between non-adjustment and adjustment positions in response to said actuator rod moving between brake apply and release positions.

6. The brake slack adjuster according to claim 5, wherein said biasing member urges said actuator from said adjustment position to said non-adjustment position.

7. The brake slack adjuster according to claim 5, wherein said worm gear end portion helical teeth and said actuator complementary helical teeth temporarily disengage in said adjustment position in response to movement of said actuator rod in a first direction.

8. The brake slack adjuster according to claim 7, wherein said worm gear rotates said gear to a desired slack adjuster position in response to movement of said actuator rod in a second direction opposite said first direction.

9. The brake slack adjuster according to claim 7, wherein said adjustment position corresponds to said brake apply position and said non-adjustment position corresponds to said brake release position.

10. The brake slack adjuster according to claim 5, wherein said actuator rod end includes a slot having opposing terminal ends defining said non-adjustment and adjustment positions, and said retainer defined by a pin disposed with said slot secured to said actuator.

11. The brake slack adjuster according to claim 5, wherein said actuator includes a cavity having length with said one end of said length defining said non-adjustment position and the other end of said length defining said adjustment position.

12. The brake slack adjuster according to claim 11, wherein said actuator rod end includes an annular groove, and said retainer defined by a clip received in said annular groove.

13. The brake slack adjuster according to claim 11, wherein said actuator includes a flange having said aperture and defining said one end.

14. A brake slack adjuster comprising:

a housing having an opening with a gear disposed within said opening, said housing including a bore adjacent to said opening;

a worm gear having an axis disposed within said bore engaging said gear, said worm gear having an end portion with helical teeth;

an actuator including an outer surface adjacent to said bore and an inner surface having complementary helical teeth engaging said helical teeth of said worm gear, said actuator movable along said axis relative to said worm gear;

a biasing member between said actuator and said housing bore urging said actuator into engagement with said worm gear end portion; and

a pawl assembly coacting with said actuator preventing rotational movement of said actuator about said axis relative to said housing.

15. The brake slack adjuster according to claim 14, wherein said pawl assembly is received within a second bore in said housing transverse to said bore, said pawl assembly having an end captured within an elongated slot in said actuator which is generally parallel with said axis.

16. The brake slack adjuster according to claim 15, wherein said pawl assembly includes a neck adjacent to said end, and said elongated slot defines a lip with said lip received by said neck.

17. The brake slack adjuster according to claim 16, wherein said elongated slot includes an enlarged opening for receiving said end, and said elongated opening excluding said enlarged opening includes a width less than a diameter of said end.

18. A brake slack adjuster comprising:

a housing having an opening with a gear disposed within said opening, said housing including a bore adjacent to said opening;

a worm gear having an axis disposed within said bore engaging said gear;

an actuator movable between non-adjustment and adjustment positions, said actuator having an aperture;

an actuator rod having an end disposed within said aperture, said end including a slot having opposing terminal ends defining said non-adjustment and adjustment positions, and a pin disposed with said slot secured to said actuator.